

**I CLAIM:**

**Claim 1:** An improved air hose coupling 1 for cold environment operation, wherein the coupling has an enlarged airway and an airway thermal insulation liner, said liner comprising a non-metallic tube 11 fixedly inserted forward from standard threaded-end 3 of said coupling through the length of the enlarged coupling airway and extending beyond the end of the coupling barb for a predetermined distance.

**Claim 2:** An improved air hose coupling for cold environment operation as recited in **claim 1**, wherein said liner tube has a plurality of transverse air inlet holes 13 near end of tube,

whereby no condensate water may enter the coupling airway unless carried by compressed air flow or unless the level of water collected around the base of the extended liner tube has reached the level of the nearest transverse air inlet.

**Claim 3:** An improved air hose coupling for cold environment operation as recited in **claim 1**, wherein said liner tube extension has an internal spring-biased air flow stop-valve 14,

whereby any water vapor migration or liquid water flow from the flexible air hose is prohibited from entering the coupling airway further unless the compressed air source is operating.

**Claim 4:** An improved air hose coupling for cold environment operation as recited in **claim 1**, wherein said coupling barb has a thin-wall metal tube 16 sleeve of predetermined cross section and length fixedly attached in line to the end of the coupling barb 2,

whereby this tube sleeve extension acts as a heat sink inducing such water as will, to freeze on the cold surface and be captured by the sink.

**Claim 5:** A method for protecting outdoor tire inflator machine air hose couplings against internal ice blockage during cold weather comprising:

- (a) flow controlling means for directing hose-condensate water flow away from said coupling airway,
- (b) providing an insulation barrier between cold metal surface of said coupling airway and intruding condensate water,
- (c) freezing means for extracting heat from extant cold condensate water in safe areas away from said coupling,
- (d) stopping means for positive stopping water/vapor migration before entering said coupling airway,
- (e) providing multiple air inlets to said coupling airway.